

## EAST Search History

## EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L4	14	428/408,336,446,698,469,472.cds. AND ((diamond?like NEAR1 carbon) OR DLC) AND (nanocomposite OR nano?composite OR DLN) AND (titanium OR chromium OR (titanium NEAR1 (carbide OR nitride)) OR (chromium NEAR1 (nitride OR carbide) OR TiN OR TiCN OR CrN OR "Cr.sub.3C.sub.2" OR Tic)) AND (level layer structure)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/01/07 10:10
L5	1	428/408,336,446,698,469,472.cds. AND ((diamond?like NEAR1 carbon) OR DLC) SAME (nanocomposite OR nano?composite OR DLN) SAME (titanium OR chromium OR (titanium NEAR1 (carbide OR nitride)) OR (chromium NEAR1 (nitride OR carbide) OR TiN OR TiCN OR CrN OR "Cr.sub.3C.sub.2" OR Tic)) AND (level layer structure)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/01/07 10:13
L6	0	"6228471.pn"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/01/07 10:15
L7	0	"6228471.pn."	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/01/07 10:15
L8	2	"6228471".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/01/07 10:15
L9	1	"428".das. AND ((diamond?like NEAR1 carbon) OR DLC) SAME (nanocomposite OR nano?composite OR DLN) SAME (titanium OR chromium OR (titanium NEAR1 (carbide OR nitride)) OR (chromium NEAR1 (nitride OR carbide) OR TiN OR TiCN OR CrN OR "Cr.sub.3C.sub.2" OR Tic)) AND (level layer structure)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/01/07 10:18
L10	35	"428" das AND ((diamond?like NEAR1 carbon) OR DLC) AND (nanocomposite OR nano?composite OR DLN) AND (titanium OR chromium OR (titanium NEAR1 (carbide OR nitride)) OR (chromium NEAR1 (nitride OR carbide) OR TiN OR TiCN OR CrN OR "Cr.sub.3C.sub.2" OR Tic)) AND (level layer structure)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/01/07 10:18

L11	21	L10 NOT L4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/01/07 10:18
L12	1	"6110329".pn. AND (titanium chromium)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/01/07 10:19
L13	0	"6110329".pn. AND (titanium chromium) AND DLN AND DLC	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/01/07 10:20
S1	7090	423/446.ccls. OR 427/402.ccls. OR 428/552,688,699.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/22 08:47
S2	6	"5795648".PN. OR "5466431".PN. OR "6200675".PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/22 08:50
S3	1240	S1 AND (layer WITH (titanium OR chromium))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/22 08:52
S4	12	S1 AND (layer WITH (titanium OR chromium)) SAME (diamond\$1like ADJ1 carbon)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/22 08:52
S5	16	((VENKATRAMAN ADJ1 CHANDRA) OR (MAJERONI ADJ1 KEITH) OR (KESTER ADJ1 DANIEL)).INV.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/22 08:56
S6	2	((VENKATRAMAN ADJ1 CHANDRA) AND (MAJERONI ADJ1 KEITH) AND (KESTER ADJ1 DANIEL)).INV.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/22 08:56

S7	1	((VENKATRAMAN ADJ1 CHANDRA) OR (MAJERONI ADJ1 KEITH) OR (KESTER ADJ1 DANIEL)). INV. AND S1	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/22 08:56
S8	7150	423/446.ccls. OR 427/402.ccls. OR 428/552,688,699.ccls	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/04/16 08:40
S9	3	S8 AND (layered NEAR2 structure) SAME (layer WITH ((Ti AND Cr) OR (Titanium AND Chromium)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/04/16 08:40
S10	486	S8 AND ((layer OR core OR center) WITH ((Ti AND Cr) OR (Titanium AND Chromium)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/04/16 08:40
S11	1	S8 AND ((layer OR core OR center) WITH ((Ti AND Cr) OR (Titanium AND Chromium))) AND (layer NEAR2 DLN) AND (layer NEAR2 DLC)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/04/16 08:41
S12	6	S8 AND ((layer OR core OR center) WITH ((Ti AND Cr) OR (Titanium AND Chromium))) AND (layer NEAR2 diamond \$like) AND (layer NEAR2 DLC)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/04/16 08:41
S13	168	((layer OR core OR center) WITH ((Ti AND Cr) OR (Titanium AND Chromium))) AND (layer NEAR2 diamond\$like) AND (layer NEAR2 DLC)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/04/16 08:44
S14	3	((layer OR core OR center) WITH ((Ti AND Cr) OR (Titanium AND Chromium))) AND (layer NEAR2 diamond\$like NEAR2 nanocomposite) AND (layer NEAR2 DLC)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/04/16 08:48
S15	5	((layer OR core OR center) WITH ((Ti AND Cr) OR (Titanium AND Chromium) OR TiC OR "titanium carbide" OR TiN OR "titanium nitride" OR titanium OR chromium OR TiCN OR CrN OR Cr3C2 OR "Cr.sub.3C.sub.2")) AND (layer NEAR2 diamond\$like NEAR2 nanocomposite) AND (layer NEAR2 DLC)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/04/16 08:50

S16	86	((layer OR core OR center) WITH ((Ti AND Cr) OR (Titanium AND Chromium) OR TiC OR "titanium carbide" OR TiN OR "titanium nitride" OR titanium OR chromium OR TiCNN OR CrN OR Cr3C2 OR "Cr.sub.3C.sub.2")) AND ((layer OR shell OR cover OR covering) NEAR2 diamond\$like NEAR2 (material OR nanocomposite)) AND ((layer OR shell OR cover OR covering) NEAR2 (DLC OR (diamond\$like NEAR2 carbon)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/04/16 08:53
S17	2	S8 AND ((layer OR core OR center) WITH ((Ti AND Cr) OR (Titanium AND Chromium) OR TiC OR "titanium carbide" OR TiN OR "titanium nitride" OR titanium OR chromium OR TiCNN OR CrN OR Cr3C2 OR "Cr.sub.3C.sub.2")) AND ((layer OR shell OR cover OR covering) NEAR2 diamond\$like NEAR2 (material OR nanocomposite)) AND ((layer OR shell OR cover OR covering) NEAR2 (DLC OR (diamond\$like NEAR2 carbon)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/04/16 08:53
S18	86	((layer OR core OR center) WITH ((Ti AND Cr) OR (Titanium AND Chromium) OR TiC OR "titanium carbide" OR TiN OR "titanium nitride" OR titanium OR chromium OR TiCNN OR CrN OR Cr3C2 OR "Cr.sub.3C.sub.2")) AND ((layer OR shell OR cover OR covering) NEAR2 diamond\$like NEAR2 (material OR nanocomposite)) AND ((layer OR shell OR cover OR covering) NEAR2 (DLC OR (diamond\$like NEAR2 carbon)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/29 10:26
S19	1	("423".clas. OR "502".clas. OR "252".clas.) AND ((layer OR core OR center) WITH ((Ti AND Cr) OR (Titanium AND Chromium) OR TiC OR "titanium carbide" OR TiN OR "titanium nitride" OR titanium OR chromium OR TiCNN OR CrN OR Cr3C2 OR "Cr.sub.3C.sub.2")) AND ((layer OR shell OR cover OR covering) NEAR2 diamond \$like NEAR2 (material OR nanocomposite)) AND ((layer OR shell OR cover OR covering) NEAR2 (DLC OR (diamond\$like NEAR2 carbon)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/29 10:26
S20	2	"5352493".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/29 10:57
S21	5	((layer OR core OR center) WITH ((Ti AND Cr) OR (Titanium AND Chromium) OR TiC OR "titanium carbide" OR TiN OR "titanium nitride" OR titanium OR chromium OR TiCN OR CrN OR Cr3C2 OR "Cr.sub.3C.sub.2")) AND (layer NEAR2 diamond\$like NEAR2 nanocomposite) AND (layer NEAR2 DLC)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/29 11:09

S22	5	((layer OR core OR center OR middle) WITH ((Ti AND Cr) OR (Titanium AND Chromium) OR TiC OR "titanium carbide" OR TiN OR "titanium nitride" OR titanium OR chromium OR TiCN OR CrN OR Cr3C2 OR "Cr.sub.3C.sub.2")) AND ((level OR layer) NEAR2 diamond\$like NEAR2 nanocomposite) AND ((level OR layer) NEAR2 DLC)	US-PGPUB; USPAT; USOCR: FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/09/08 09:17
S23	7	("0121990"   "20040074467"   "20040206600"   "4666786"   "5249554"   "5909879").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2009/09/08 09:18
S24	64	(((((Ti AND Cr) OR (Titanium AND Chromium) OR TiC OR "titanium carbide" OR TiN OR "titanium nitride" OR titanium OR chromium OR TiCN OR CrN OR Cr3C2 OR "Cr.sub.3C.sub.2")) AND (diamond\$like NEAR2 nanocomposite) AND (DLC OR (diamond?like NEAR1 carbon))))	US-PGPUB; USPAT; USOCR: FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/09/08 09:19
S25	0	S24 AND S23	US-PGPUB; USPAT; USOCR: FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/09/08 09:19
S26	8	((layer OR core OR center OR middle) WITH ((Ti AND Cr) OR (Titanium AND Chromium) OR TiC OR "titanium carbide" OR TiN OR "titanium nitride" OR titanium OR chromium OR TiCN OR CrN OR Cr3C2 OR "Cr.sub.3C.sub.2")) AND ((level OR layer) NEAR2 diamond\$like NEAR2 nanocomposite) AND ((level OR layer) NEAR2 (DLC OR (diamond?like NEAR1 carbon))))	US-PGPUB; USPAT; USOCR: FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/09/08 09:19
S27	7259	423/446.ccls. OR 427/402.ccls. OR 428/552,688,699.ccls.	US-PGPUB; USPAT; USOCR: FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/09/08 09:20
S28	5	(((((Ti AND Cr) OR (Titanium AND Chromium) OR TiC OR "titanium carbide" OR TiN OR "titanium nitride" OR titanium OR chromium OR TiCN OR CrN OR Cr3C2 OR "Cr.sub.3C.sub.2")) AND (diamond\$like NEAR2 nanocomposite) AND (DLC OR (diamond?like NEAR1 carbon)))) AND S27	US-PGPUB; USPAT; USOCR: FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/09/08 09:20
S29	21	((layer OR core OR center OR middle) WITH ((Ti AND Cr) OR (Titanium AND Chromium) OR TiC OR "titanium carbide" OR TiN OR "titanium nitride" OR titanium OR chromium OR TiCN OR CrN OR Cr3C2 OR "Cr.sub.3C.sub.2")) AND ((level OR layer OR coat OR coating) NEAR2 diamond \$like NEAR2 nanocomposite) AND ((coat OR coating OR level OR layer) NEAR2 (DLC OR (diamond?like NEAR1 carbon))))	US-PGPUB; USPAT; USOCR: FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/09/08 09:22

S30	21	((layer OR core OR center OR middle) WITH ((Ti AND Cr) OR (Titanium AND Chromium) OR TiC OR "titanium carbide" OR TiN OR "titanium nitride" OR titanium OR chromium OR TiCN OR CrN OR Cr3C2 OR "Cr.sub.3C.sub.2")) AND ((level OR layer OR coat OR coating) NEAR2 diamond? like NEAR2 nanocomposite) AND ((coat OR coating OR level OR layer) NEAR2 (DLC OR (diamond?like NEAR1 carbon)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/09/08 09:24
S33	20	428/408,336,446,698,469,472.cds. AND (diamond?like NEAR1 carbon) AND (nanocomposite)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/09/10 13:53
S34	14	428/408,336,446,698,469,472.cds. AND (diamond?like NEAR1 carbon) AND (nanocomposite) AND (titanium OR chromium OR (titanium NEAR1 (carbide OR nitride)) OR (chromium NEAR1 (nitride OR carbide) OR TiN OR TiCN OR CrN OR "Cr.sub.3C.sub.2" OR TiC))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/09/10 13:54
S35	14	428/408,336,446,698,469,472.cds. AND (diamond?like NEAR1 carbon) AND (nanocomposite OR nano?composite) AND (titanium OR chromium OR (titanium NEAR1 (carbide OR nitride)) OR (chromium NEAR1 (nitride OR carbide) OR TiN OR TiCN OR CrN OR "Cr.sub.3C.sub.2" OR TiC))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/09/10 14:07
S36	14	428/408,336,446,698,469,472.cds. AND ((diamond?like NEAR1 carbon) OR DLC) AND (nanocomposite OR nano?composite OR DLN) AND (titanium OR chromium OR (titanium NEAR1 (carbide OR nitride)) OR (chromium NEAR1 (nitride OR carbide) OR TiN OR TiCN OR CrN OR "Cr.sub.3C.sub.2" OR TiC))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/09/10 14:07
S37	14	428/408,336,446,698,469,472.cds. AND ((diamond?like NEAR1 carbon) OR DLC) AND (nanocomposite OR nano?composite OR DLN) AND (titanium OR chromium OR (titanium NEAR1 (carbide OR nitride)) OR (chromium NEAR1 (nitride OR carbide) OR TiN OR TiCN OR CrN OR "Cr.sub.3C.sub.2" OR TiC)) AND layer	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/01/05 10:30

## EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S31	4442	423/446.cds. OR 427/402.cds. OR 428/552,688,699.cds.	USPAT; UPAD	OR	ON	2009/09/08 10:02

S32	0	S31 AND (((Ti AND Cr) OR (Titanium AND Chromium) OR TiC OR "titanium carbide" OR TiN OR "titanium nitride" OR titanium OR chromium OR TiCN OR CrN OR Cr3C2 OR "Cr.sub.3C.sub.2")) AND (diamond\$like NEAR2 nanocomposite) AND (DLC OR (diamond?like NEAR1 carbon))) .dlm.	USPAT; UPAD	OR	ON	2009/09/08 10:02
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